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ABSTRACT

A report is given of a statistical analysis of the summary findings of 14 empirical studies on the effectiveness of human relations training programs for teachers. The study sought to determine the direction and size of the effect produced by training, and determine which programs were most effective. Program approaches included: (1) Social Literacy Training; (2) Reality Therapy; (3) Teacher Effectiveness Training; (4) Transactional Analysis; (5) Human Relations Training; (6) Behavior Modification; and (7) Conflict Mediation. A chart presents a summary of the findings identified in the studies, the training type, hours of training, and instruments used in the study. A discussion of the findings indicates that although some human relations training may produce negative effects, positive effects were evident in the majority of the programs analyzed. The meta-analysis suggests that the more effective human relations programs examined trained student teachers between 20 to 30 hours and used programs based on modifications of published programs. (JD)

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A Meta-Analysis of Human Relations Teacher Training Programs

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Human Relations Training was examined for effectiveness in training teachers. Using meta-analysis techniques, this study attempted to discover statistical evidence of the effectiveness of 14 of these programs. Although some Human Relations training may produce negative treatment effects, positive effects were evident in 79% of the programs analysed. Treatment groups exceeded control groups by more than .50 standard deviations in fifty percent of the studies. The meta-analysis suggested that the more effective Human Relations programs examined used student teachers at least 20 to 30 hours using programs based on modifications of published programs.

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In 1978, The National Institute of Education supported a study of the effectiveness of teacher training programs to improve classroom management (Hyman & Lally, 1982). The investigation indicated that there are many effective non-punitive approaches to school discipline. The identified programs further suggested that popular procedures such as corporal punishment and suspensions can be dramatically reduced or eliminated if teachers are appropriately trained in alternatives.

The NIE report represents a first attempt to describe and evaluate the major approaches that are being used to train teachers. These approaches include: Social Literacy training, Reality Therapy, Teacher Effectiveness Training, Transactional Analysis, Human Relations Training, Behavior Modification, conflict mediation and various curricular approaches. The investigation revealed a dearth of well designed efficacy studies even though the results suggested that all of the programs seemed to have a positive effect in changing teachers' attitudes. When accepted by the total school staff, the programs may have been helpful in improving children's self-images, reducing punitiveness and in enhancing the learning climate.

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However, Glass (1977), Jackson (1980), Rosenthal (1983), Strube and Hartmann (1983) have pointed out the inadequacy of qualitative reviews and studies that compare significance levels. In response to these shortcomings a number of researchers have adopted a meta-analytic procedure to quantitatively order and integrate collections of different treatment studies. Meta-analyses have been applied to therapy outcome research (Smith & Glass,1977; Shapiro & Shapiro,1983); the effects of social class size on attainment (Glass & Smith, 1979); the relationship between social class and achievement (White, 1977); 'experimenter effects' (Rosenthal & Rubin, 1978); self-serving bias in interpersonal influence situations (Arkin, Cooper & Koldeitz,1980); sex differences in conformity (Cooper,1979) and career education interventions (Baker & Popwicz,1983).

To substantiate the findings in the WIE report, a statistical analysis of teacher training programs was begun in 1983 and is still in progress. This presentation is a report on a preliminary meta-analysis of studies investigating the effectiveness of programs that teach Human Relations principles and procedures to improve classroom management. The purpose of the analysis was to determine the direction and size of the effect produced by training and to determine which of the various Human Relations training programs was most effective.

Method

Criteria for selecting studies

Three criteria were established to select independently reported studies to be used in the analysis. First, the studies had to contain a teacher training component in the principles and procedures of Human Relations Training. Second, each study had to be controlled. Outcomes were the reported results of comparisons between treatment and control conditions. Third, only those studies reporting

means and standard deviations were used to facilitate this preliminary analysis.

Procedure

Materials for the analysis were acquired through several sources including: a). computer searches likely to locate information that could be acquired from psychological and educational journals, ERIC, Dissertations International and NIMH Clearinghouse for Mental Health Information; b). Institutions, organizations and experts in the field; c). material available at the National Center for the Study of Corporal Punishment and Alternatives in the Schools; and d). references included in the studies located. Thirty-five studies utilizing Human Relations Training were reviewed and of these, fourteen were identified as meeting the established criteria.

Meta-analysis conversion procedures described by Glass (1976) and Wilson (1981) were used in the fourteen studies. Meta-analysis makes the outcomes of independent studies comparable by standardinzing results. 'Effect size', the product of meta-analysis, is a unit similar to the Z score of descriptive statistics. It represents the number of standard deviations by which a treated group exceeds an untreated group. In this evaluation, experimental treatment group posttest results were compared to control group posttest outcomes. The following formula was used to standardize the data into effect sizes:

$$\text{Effect Size (ES)} = \bar{X}_T - \bar{X}_c \div SD_c \text{ where,}$$

$\bar{X}_T$ = posttest mean of the treatment group
$\bar{X}_c$ = posttest mean of the control group
SD_c = posttest standard deviation of the control group, which is assumed to be unaffected by the treatment. (Cohen, 1971)

The accumulated effect sizes were then averaged and comparisons were made in descriptive statistics terms. Subareas within the studies also were compared. These subareas included hours of training, program type, and subject classification.

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Results

The analysis of treatment effects in the 14 studies indicated that the average effect size (ES) was .51. While the largest difference between treatment and control groups was 2.59 SD, 21% of the treatment effects were negative. Descriptive data and other findings are summarized in Table 1. The 87 response variables

Table 1

Descriptive Statistics for Human Relations Programs

Number of studies	14
Number of different program types	5
Number of variables	87
Effect size average	0.51
Effect size median	0.38
Effect size range	3.20
Largest positive effect size	2.59
Smallest positive effect size	0.06
Largest negative effect size	-0.61
Percentage of positive effects	79%

identified included measures of self-concept, perception, degree of responding, empathy, teachers' statements, students' lack of self-descipline and other responses. The number of variables measured ranged from 1 response per study to 24. The instruments used to assess these variables also differed in number and type (see Table 2).

Table 2

Summary of Findings for the 14 Studies

Authors	N	Variables N	Training Type	Instruments	ES[a]
Bailey, 1975	51	4	Gazda's Modified HRT Model	Index of Perception; Index of Responding	2.59
Long, Paradise & Coleman, 1978	64	1	Ivey Micro-counseling	Carkhuff Scale of Empathic Understanding	1.40
Berenson, 1971	48	12	Modified	Communication Index of Interpersonal Functioning Flanders	1.04
Miller, 1973	16	5	Carkhuff Model	Carkhuff Scales	0.73
Norton, 1972	66	4	Modified HRT	Affective Sensitivity Scale; Tenn. Self-Concept Scale; Empathic Understanding in Interpersonal Processes Gross Ratings of Facilitative Interpersonal Functioning;	0.73
Oates, 1971	57	6	Mid-Coast Maine EPDA	Minnesota Teacher Attitude Inventory	0.51
Childers, 1973	38	17	Modified HRT	Flanders	0.47
Scamman 1975	48	2	National Training Laboratory Model (T-groups)	Index of Responding Index of Perception	0.30
Sebring 1970	32	6	Modified HRT	California F Scale; Minnesota Teacher Attitude Inventory; Willard SEC Index	0.12
Casey & Roark, 1980	124	8	Gazda Model	Index of Responding; Index of Perception; Tenn. Self-concept Scale; How Others See Me Scale	0.11

Table 2 (con't)

Authors	N	Variable N	Training Type	Instruments	ES[a]
Blackburn 1976	992	1	Modified HRT	Questionaire	0.06
Bennett, Rosser & Hope 1977	230	24	Encounter-tapes for Personal Growth Groups	Philosophy of Human Nature Scale	-0.08
Davis & Gazda 1974	137	2	Gazda Model	Index of Perception; Index of Responding	-0.17
Goodwin & Payne 1981	28	1	Gazda Model	Tenn. Self-Concept Scale	-0.61

[a]Average effect size

Although all of the studies used human relations programs, different models of training were implemented. Modified models were designed for use in 7 of the 14 studies. The effect sizes of these models appeared to produce a treatment effect greater than that of the other models (see Table 3)

Table 3

Number of Studies	Training Model	Effect[a] Size
3	Gazda Model	-0.22
1	Carkhuff Model	0.73
7	Modified Models	0.75
2	T-Groups	0.23
1	Micro-Counseling	0.06

[a]Averaged for more than one study

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Table 4 presents the results of an analysis of training time. It shows that 20 to 30 hours of training seemed to be most effective. Three classifications of subjects were noted; teachers,

Table 4

Meta-analysis of Training Times

Studies N	Hours of Training	Average Effect Size	Range	Median
3	60-50	-0.01	1.12	0.06
3	30-20	1.45	1.86	1.04
5	18-14	0.42	0.90	0.12
3	10 or less	0.54	1.48	0.30

student teachers and students. The eight studies using student teachers as subjects had the largest treatment effect (see Table 5).

Table 5

Meta-analysis of Subject Classifications

Studies N	Subject Type	Average Effect Size	Range	Median
8[a]	Student Teachers	0.79	2.67	0.47
5	Teachers	0.29	0.90	0.29
2	Students	0.28	0.16	

[a]One study used students and student teachers as subjects.

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Discussion

The results of the meta-analysis support the findings of the NIE report in suggesting that human relations training can produce positive changes in teacher attitudes and learning climates. It should be noted, however, that some programs, also can produce negative effects. Several factors were identified as contributing to successful implementation of a training program. First, it was found that the most effective training period was between 20 to 30 hours; longer or shorter training times were considerably less effective. Second, human relations training was most successful with student teachers. The small treatment effects for experienced teachers and students suggested that another type of program may be better suited for them. Third, programs modified to suit the characteristics of the subjects and the conditions imposed on training are better than standard packaged models. Although the Carkhuff model also appeared to be effective, only one sample of this program was examined. Gazda's model produced a negative treatment effect; the untreated teachers performed better than those treated. Close examination of the training process used in the studies revealed that none of the programs contained the optimum training factors mentioned above. There was evidence, however, that the negative effect found was not solely inherent in the content of the program. When the model was modified and used with student teachers in a 20 hour training program (Bailey, 1975), treated teachers performed twice as well as untreated teachers. The larger changes in student teachers' attitudes could reflect several factors. The individual focus of humanistic philosophy may be contrary to the usual school focus on groups, the pressure for teachers to produce more learning, and the emphasis on orderly quiet classrooms. Several years of experience in this more bureaurocratic atmosphere may build teacher resistence to changes which they may feel are contrary to the culture of the schools. Another explanatory

phenomenon may be related to flexibility. Student teachers may include a larger pool of more flexible individuals who are open to change. Pools of experienced teachers may have either lost their more flexible peers to other jobs and/or may represent less flexibility to change as a matter of age alone. This current review reveals that the studies examined reflect a methodological weakness apparent in the previous study (Hyman & Lally, 1982). Few of the studies focused on what should be the major dependent variable in efficacy studies. Changes in teacher behavior may not neccessarily result in changes in students. This needs to be done before Human Relations training can be termed effective. However, it is encouraging that human relations training programs examined in this study are effective in producing teacher attitude and learning climate change, especially when the programs are modified to train student teachers for 20 to 30 hours.

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Appendix

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